

CLAIMS

What is claimed as new and desired to be protected by Letters Patent of the United States is:

1. An audio transmission method comprising:
 - 5 (a) receiving digital audio information from a plurality of client sources at a server location;
 - (b) combining said received digital audio information to form combined digital audio signal; and
 - (c) transmitting said combined digital audio signal to said client sources;
- 10 wherein steps (a), (b) and (c) are performed in near real time.
2. A method as in claim 1 wherein said combining and transmitting operations further comprise:

concatenation of said audio information received from said plurality of client sources and transmitting said concatenated audio information to said client sources.
- 15 3. A method as in claim 1 wherein said combining and transmitting operations further comprise:

mixing said received digital audio information at said server location and transmitting said mixed digital audio information to said client sources.
- 20 4. A method as in claim 1 wherein said digital audio information is received from the Internet and said transmitting of said combined audio information is an Internet transmission.

5. A method as in claim 3 further comprising compensating said received digital audio information for transmission time delays before performing said mixing.

6. A method as in claim 5 wherein each received digital audio 5 information is compensated for a transmission delay between its associated client source and said server location.

7. A method as in claim 6 further comprising transmitting a ping message from said server location to each said client source, determining said delay from the time of arrival of a reply ping message from each client source, and using said 10 determined delay from each client source to adjust the timing of respective digital audio information received from a said client source prior to said linear mixing operation.

8. A method as in claim 1 wherein said received digital audio information is in a compressed audio signal format.

15 9. A method as in claim 1 wherein said combined digital audio information is in a compressed audio signal format.

10. An audio transmission method comprising:

transmitting first digital audio information from a client source to a digital transmission system;

20 receiving second digital audio information at said client source from said digital transmission system, said second digital audio information including said first digital audio information from said client source and additional digital audio information from at least one other client source, said transmitting and receiving operations being performed in near real time.

11. A method as in claim 10 wherein said second digital audio information is concentrated digital audio information which includes said first digital audio information from said client source and aid additional digital audio information.

5 12. A method as in claim 11 further comprising linearly mixing at said client source said concentrated digital audio information.

13. A method as in claim 12 further comprising playing said linearly mixed digital audio information at said client source location.

14. A method as in claim 10 wherein said second digital audio information is a mix of audio information contained in said first digital audio information with other audio information.

10 15. A method as in claim 14 wherein said other audio information is audio information from at least one other client source.

16. A method as in claim 14 further comprising playing said second digital audio information at said client source location.

15 17. A method as in claim 10 wherein said first digital audio information is in a compressed audio signal format.

18. A method as in claim 10 wherein said second digital audio information is in a compressed audio signal format.

20 19. An apparatus for handling audio information comprising:

a receiver for receiving compressed digital audio information from a plurality of client sources over a digital network;

a signal combiner which decompresses said compressed audio signal information and combines received digital decompressed audio information from said plurality of client sources into a combined compressed digital audio signal; and

5 a transmitter for transmitting said combined compressed digital audio signal to said client sources over said digital network, wherein said receiver, signal combiner and transmitter operate in near real time.

20. An apparatus as in claim 19 wherein said signal combiner concentrates received digital audio information from said plurality of client 10 sources to form said combined digital audio signal.

21. An apparatus as in claim 19 wherein said signal combiner mixes received digital audio information to form said combined digital audio signal.

22. An apparatus as in claim 19 wherein said digital network includes the Internet.

15 23. An apparatus as in claim 19 further comprising a variable delay system for compensating said received digital audio information for transmission time delays.

24. An apparatus as in claim 22 wherein said variable delay system comprises a respective delay element for each said received digital audio 20 information.

25. An apparatus as in claim 24 wherein said receiver, combiner and transmitter are provided at a server location, said apparatus further comprising a ping component at said server location for transmitting a ping signal to each of said client sources, for receiving a reply ping signal from said client sources, and

for determining a transmission delay for each client source, said ping component using said determined delay to adjust a respective delay element.

26. An apparatus for handling audio information comprising:

a transmitter for transmitting compressed first compressed digital audio
5 information from a client source to a digital transmission system;

a receiver for receiving second compressed digital audio information from
said digital transmission system, said second compressed digital audio
information including said first audio information transmittal from said client
source and additional digital audio information from at least one other client
10 source, said transmitter and receiver operating in near real time.

27. An apparatus as in claim 26 further comprising a mixer at said client
source for mixing said first digital audio information, and said additional digital
audio information to produce mixed digital audio information.

28. An apparatus as in claim 27 further comprising an audio playback
15 device for playing said mixed digital audio information at said client source
location.

29. An apparatus as in claim 26 further comprising a decoder for
decompressing said second compressed digital audio information and providing a
decompressed audio signal.

20 30. An apparatus as in claim 27 further comprising a decoder for
decompressing said second compressed digital audio information, said mixer
mixing audio signals at the output of said decoder to provide a mixed
decompressed audio signal.

31. An apparatus as in claim 29 further comprising an audio reproduction circuit for playing said decompressed audio signal.
32. An apparatus as in claim 30 further comprising an audio reproduction circuit for playing said mixed decompressed audio signal.